

CLAIM AMENDMENTS:

Pending Claims

Claim 1 (Currently Amended): An assembly comprising:

a layer made of ultrasound transducing material;

an electrically conductive coating on a surface of said layer of ultrasound transducing material;

a substrate made of dielectric material that is not ultrasound transducing material;

an electrical conductor formed on a surface of said substrate, said substrate being disposed so that said electrical conductor confronts said electrically conductive coating on said layer of ultrasound transducing material;

an electrically conductive mesh disposed so that a portion intervenes between and is in contact with said electrical conductor on said substrate and said electrically conductive coating on said layer of ultrasound transducing material; and

adhesive material occupying interstices in said mesh and in contact with said electrically conductive coating and said electrical conductor.

Claim 2 (Original): The assembly as recited in claim 1, wherein said adhesive material comprises epoxy resin, polyurethane, silicone, cyanoacrylate or functionally equivalent adhesive.

Claim 3 (Original): The assembly as recited in claim 1, wherein said mesh comprises strands of metal.

Claim 4 (Original): The assembly as recited in claim 1, wherein said mesh comprises strands of polymer plated with metal.

Claim 5 (Original): The assembly as recited in claim 1, wherein said ultrasound transducing material comprises piezoelectric ceramic.

Claim 6 (Original): The assembly as recited in claim 1, wherein said dielectric material comprises a polymer.

Claim 7 (Original): The assembly as recited in claim 1, wherein said mesh has a total thickness of 10 microns or less.

Claim 8 (Original): The assembly as recited in claim 1, wherein said mesh comprises electrodeposited material.

Claim 9 (Original): An ultrasound transducer comprising:

a body of piezoelectric ceramic material, said body comprising front and rear surfaces;

an electrode formed on said rear surface of said body of piezoelectric ceramic material;

a substrate made of dielectric material;

a pad of electrically conductive material formed on a surface of said substrate, said substrate being disposed so that said pad confronts said electrode;

an electrically conductive mesh disposed so that a portion intervenes between and is in contact with said pad and said electrode; and

adhesive material occupying spaces in said mesh and in contact with said pad and said electrode.

Claim 10 (Original): The ultrasound transducer as recited in claim 9, wherein said adhesive material comprises epoxy resin, polyurethane, silicone, cyanoacrylate or

functionally equivalent adhesive.

Claim 11 (Original): The ultrasound transducer as recited in claim 9, wherein said mesh comprises strands of metal.

Claim 12 (Original): The ultrasound transducer as recited in claim 9, wherein said mesh comprises strands of polymer plated with metal.

Claim 13 (Original): The ultrasound transducer as recited in claim 9, wherein said dielectric material comprises a polymeric film.

Claim 14 (Original): The ultrasound transducer as recited in claim 9, wherein said mesh has a total thickness of 10 microns or less.

Claim 15 (Original): The ultrasound transducer as recited in claim 9, wherein said mesh comprises electrodeposited material.

Claim 16 (Original): The ultrasound transducer as recited in claim 9, further comprising an acoustic matching layer disposed in front of said front surface of said body of piezoelectric ceramic material.

Claim 17 (Original): The ultrasound transducer as recited in claim 9, further comprising an acoustic backing layer disposed behind said dielectric substrate.

Claim 18 (Original): An ultrasound transducer comprising:

an array of ultrasound transducer elements, each of said ultrasound transducer elements comprising a respective body of piezoelectric ceramic material and a respective electrode formed on a surface of said respective body, said bodies being

substantially acoustically isolated from each other, and said electrodes being substantially electrically isolated from each other; and

a printed circuit comprising an array of pads of electrically conductive material, each pad confronting a respective one of said electrodes, said pads being substantially electrically isolated from each other,

wherein said printed circuit is bonded to said array of transducer elements by adhesive material disposed between said confronting electrodes and pads, further comprising a multiplicity of sections of an electrically conductive mesh embedded in said adhesive material, each one of said mesh sections being sandwiched between a respective one of said electrodes and a respective one of said pads, each of said mesh sections being separated from adjacent mesh sections by a respective gap.

Claim 19 (Original): The ultrasound transducer as recited in claim 18, wherein said printed circuit further comprises an array of electrically conductive traces, each of said traces being electrically connected to a respective one of said pads.

Claim 20 (Original): The ultrasound transducer as recited in claim 19, wherein said printed circuit further comprises a flexible dielectric substrate that supports said pads and said traces.

Claim 21 (Original): The ultrasound transducer as recited in claim 20, further comprising an acoustic backing layer, wherein said flexible dielectric substrate is sandwiched between said array of ultrasound transducer elements and said acoustic backing layer.

Claim 22 (Original): The ultrasound transducer as

recited in claim 18, wherein said adhesive material comprises epoxy resin, polyurethane, silicone, cyanoacrylate or functionally equivalent adhesive.

Claim 23 (Original): The ultrasound transducer as recited in claim 18, wherein said mesh has a total thickness of 10 microns or less.

Claim 24 (Original): The ultrasound transducer as recited in claim 18, wherein said mesh is electroformed.

Claims 25-33 (Canceled).